

REMARKS

In the outstanding Office Action¹, the Examiner rejected claims 1-4 under 35 U.S.C. §112, second paragraph; rejected claims 1 and 3 under 35 U.S.C. §102(b) as being anticipated by Lee et al. (IEEE-NANO 2003, Third IEEE Conference on Nanotechnology, 12-14 August, 2003, vol. 2, pp. 729-732, hereafter “Lee”); rejected claims 1 and 4 under 35 U.S.C. §102(b) as being anticipated by Chou et al. (Biophysical Journal, October 2002, vol. 83, pp. 2170-2179, hereafter “Chou”); rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over Lee; rejected claims 1, 2, and 4 under 35 U.S.C. §103(a) as being obvious over Segawa et al. (U.S. Patent Application Publication No. 2006/0127904, hereafter “Segawa”); rejected claim 3 under 35 U.S.C. §103(a) as being obvious over Segawa in view of Lee; and provisionally rejected claims 1 and 4 on the ground of nonstatutory obviousness-type double patenting over claim 29 of copending Application No. 10/525,714 (hereafter “the '714 Application”).

By this Amendment, Applicants amend claims 1-4 and add new claims 11-13. Claims 1-13 are now pending, with claims 5-10 withdrawn from consideration.

Applicants have amended claims 1-4 and respectfully request withdrawal of the rejection of claims 1-4 under 35 U.S.C. §112, second paragraph.

Applicants respectfully traverse the rejection of claims 1 and 3 under 35 U.S.C. §102(b) as being anticipated by Lee.

Claim 1, as amended, recites a method for stretching a single-stranded nucleic acid, comprising, among other things, “providing a reaction detecting section including a

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

first electrode, a second electrode, and a reaction well sandwiched between the first electrode and the second electrode, the reaction well containing an aqueous solution of pH 5 to 11, and the first electrode having a surface area smaller than that of the second electrode," (emphasis added).

Lee, at page 729, column 2, discloses, "[a] pair of aluminum electrodes (gap width: 6 μm) with round-ended or flat-ended shapes were microfabricated on [an] oxide-coated (5000 \AA) silicon substrate." As evident from Figure 1 of Lee, reproduced below, the aluminum electrodes taught by Lee have equal surface areas. Accordingly, Lee cannot teach or suggest "providing a reaction detecting section including a first electrode, a second electrode, and a reaction well sandwiched between the first electrode and the second electrode, the reaction well containing an aqueous solution of pH 5 to 11, and the first electrode having a surface area smaller than that of the second electrode," as recited in amended claim 1. Claim 1 thus distinguishes over Lee. Claim 3 depends from claim 1 and distinguishes over Lee at least due to its dependence.

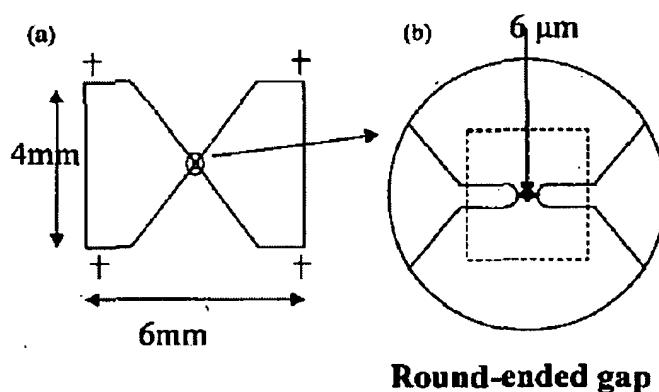


Figure 1. (a) schematic diagram of a round-ended two electrode gap (b) enlarged view of the two-electrode region

Applicants respectfully traverse the rejection of claims 1 and 4 under 35 U.S.C. §102(b) as being anticipated by Chou.

Chou teaches electrodeless dielectrophoresis of single- and double-stranded DNA, which cannot constitute a teaching of “providing a reaction detecting section including a first electrode, a second electrode, and a reaction well sandwiched by the first electrode and the second electrode,” as recited in amended claim 1. Accordingly, claim 1 distinguishes over Chou. Claim 4 depends from claim 1 and distinguishes over Chou at least due to its dependence.

Applicants respectfully traverse the rejection of claim 2 under 35 U.S.C. §103(a) as being unpatentable over Lee.

Claim 2 depends from claim 1, and as discussed above, amended claim 1 distinguishes over Lee. Accordingly, claim 2 distinguishes over Lee at least due to its dependence.

Applicants respectfully traverse the rejection of claims 1, 2, and 4 under 35 U.S.C. §103(a) as being obvious over Segawa and the rejection of claim 3 under 35 U.S.C. §103(a) as being obvious over Segawa in view of Lee. Segawa is not prior art against this patent application.

This application is the U.S. National Stage of an International Application filed on October 6, 2004 and claims the benefit of foreign priority to Japanese Patent Application No. 2003-346779, filed on October 6, 2003. A certified copy of the foreign priority document was submitted on April 4, 2006. An English translation of the foreign priority document is enclosed along with a statement of accurate translation.

Segawa (U.S. 2006/0127904) is the U.S. National Stage of an International Application that published in Japanese. Therefore, Segawa is not prior art under 35 U.S.C. § 102(e).

Segawa (WO 2004/018663) was published by the WIPO on March 4, 2004, which is later than the priority date of this application. Accordingly, Segawa is not prior art against this application. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1, 2, and 4 under 35 U.S.C. §103(a) as being obvious over Segawa and the rejection of claim 3 under 35 U.S.C. §103(a) as being obvious over Segawa in view of Lee.

Because the Examiner's nonstatutory obviousness-type double patenting rejection of claims 1 and 4 over claim 29 of the '714 Application is provisional, Applicants will address this rejection either when this application issues, or when the '714 Application issues.

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: August 4, 2008

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